



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,883	01/07/2002	Robert W. McClane	6300.103	8869
22913	7590	08/09/2005	EXAMINER	
WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY) 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			ROY, BAISAKHI	
			ART UNIT	PAPER NUMBER
			3737	
DATE MAILED: 08/09/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

TJL

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/040,883	MCCLANE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Baisakhi Roy	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 30 March 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-13 and 15-45 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-45 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

2. Applicant is advised that should claim 13 be found allowable, claim 27 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-8, 11-13, 15-24, and 27-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Bernstein et al. (5873831). Bernstein et al. disclose a method and apparatus for imaging the spatial distribution and concentration level of macular carotenoids in a live subject (abstract (lines 1-9)), by obtaining a light source comprising

Art Unit: 3737

a lamp or a laser (col. 5 lines 25-35) that generates light at a wavelength giving a Raman response with a wavelength shift for one or more carotenoids to be detected (col. 4 lines 16-18), directing light from the light source onto biological or retinal tissue or macular tissue of an eye (col. 5 lines 1-6), wherein the light directed onto the tissue has an intensity that does not destroy the tissue and does not substantially alter carotenoid levels in the tissue (col. 5 lines 10-15, col. 6 lines 34-39, claims 1, 17, 19), a light delivery and collection means or an optical nodule for collecting light scattered from the tissue with the scattered light including elastically and inelastically scattered light having a plurality of Raman signals corresponding to one or more macular carotenoids (col. 4 lines 18-26, col. 6 lines 40-56), a wavelength selective means or devices for selectively removing elastically scattered light (col. 5 lines 60-64).

Bernstein et al. teach a detection means or an optical detection device configured to measure the intensity of shifted light characteristic of one or more carotenoids to be detected where the detection means comprises an optical detector array on a charge coupled device camera or a photo detector (col. 6 lines 5-14).

The reference further teaches an analyzing means such as a computer or a data processing device for analyzing the spatial position and intensity of the Raman signals in the inelastically scattered light and an output means or output device or monitor or printer for producing an image of the Raman signals with the image representing the spatial distribution and concentration level of the one or more macular carotenoids in the macular tissue (col. 6 lines 15-27 lines 50-56, col. 7 lines 47-50).

Bernstein et al. teach said light source generating light at a wavelength in the range of 450-550 nm that overlaps the absorption bands of the one or more macular carotenoids to be detected (col. 4 lines 53-56) with an exposure spot size of about 1 mm and exposure time of 10 seconds (col. 5 lines 40-41). Bernstein et al. further teach analyzing the inelastically scattered light at frequencies characteristic of macular carotenoids (col. 6 lines 5-9).

Bernstein et al. further teach said light source and the optical module to be linked by a fiber optic bundle (col. 5 lines 55-59) where the optical module comprises a lens, a filter adapted to be angle tuned, and beam splitter (col. 4 lines 16-28), and where the optical module comprises a scanning type instrument configured to sequentially scan a light beam from point to point across the tissue (col. 5 lines 32-37).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9, 10, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein et al. in view of Treado et al. (20030004419). Bernstein et al. teach displaying the carotenoid levels but do not explicitly teach generating a map or a surface plot. In the same field of endeavor, Treado et al. disclose a method of generating Raman maps of surfaces ([0035], fig. 1-3). It would have therefore been obvious to one of ordinary skill in the art to use the teaching by Treado et al. to modify

the teaching by Bernstein et al. for the purpose of generating an output image clearly representing the spatial distribution and concentration level of the carotenoids.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baisakhi Roy whose telephone number is 571-272-7139. The examiner can normally be reached on M-F (7:30 a.m. - 4p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

B.R.

BR

  
BRIAN L. CASLER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700